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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,621	04/26/2001	Jerry Prismantas	060783/P001US/10120272	7677

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EXAMINER

MOORE JR, MICHAEL J

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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08/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/843,621

Applicant(s)

PRISMANTAS ET AL.

Examiner

Michael J. Moore, Jr.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-29,31-33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5-11,20-29,31 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☒ Claim(s) 32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

In response to Applicant's submission of a "Pre-Appeal Brief Request for Review" on 3/29/07, a conference was held. As a result of the conference, prosecution is hereby reopened. The finality of the previous Office Action has been withdrawn.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
)
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim **14** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim **14** recites the limitation "said adjusting step" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **12-19** are rejected under 35 U.S.C. 102(e) as being anticipated by Howard (U.S. 7,024,680). *Howard* teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **12**, “detecting interference using a filter”, “sweeping the filter across an RF band of interest”, and “calculating characteristics of RF interference within the RF band of interest to arrive at an interference profile of periodicity and discrete durations of the interference” is anticipated by the RF Impairment Detector and Classifier 220 (filter) of Figure 2 that identifies RF impairments (interference profile) on the upstream channel (RF band of interest) by examining FEC errors, FFT output data, and time sample data as spoken of on column 6, lines 26-31 and 59-67.

Lastly, “determining the most efficient of scheduling the RF data transfer during the intervals that avoid the interference, and transmitting the RF data during the data transfer intervals and allowing forward error correction of a receiver to correct errors in the RF data transfer” is anticipated by the periodic impulse/burst noise (PIB) detection system (means) spoken of on column 11 line 62 – column 12 line 5, as well as column 13, lines 36-50, that uses the PIB pulse width as a factor to determine whether to apply forward error correction or to schedule around the interference.

Regarding claim **13**, “wherein the filter is a narrow band filter” is anticipated by the RF Impairment Detector and Classifier 220 (narrow band filter) of Figure 2 that identifies RF impairments on the upstream channel by examining FEC errors, FFT output data, and time sample data as spoken of on column 6, lines 26-31 and 59-67.

Regarding claim **14**, “wherein the desired RF transmissions occur in sequential repetitive time slots and wherein the adjusting step includes the step of eliminating at least one of the time slots for the duration of the interference” is anticipated by the system manager 222 and scheduler 218 of Figure 2 that receives a report of periodic impulse/burst noise and avoids the interference by not scheduling any upstream transmissions during intervals (time slots) where the interference is present as spoken of on column 13, lines 37-50.

Regarding claim **15**, “wherein the desired RF transmissions are rescheduled for the duration of the interference” is anticipated by the system manager 222 and scheduler 218 of Figure 2 that receives a report of periodic impulse/burst noise and avoids the interference by not scheduling any upstream transmissions during intervals where the interference is present as spoken of on column 13, lines 37-50.

Regarding claim **16**, “wherein a modulation of the RF transmissions is changed to accommodate data in remaining ones of the time slots” is anticipated by the transmission with lower order of modulation as spoken of on column 13, lines 47-50.

Regarding claim **17**, “wherein a code rate of the RF data transfer is adjusted to accommodate remaining ones of the time slots” is anticipated by the transmission with higher forward error correction (FEC)/interleaving as spoken of on column 13, lines 47-50.

Regarding claim **18**, “wherein the RF interference is repetitive RF interference” is anticipated by the periodic impulse/burst noise spoken of on column 13, lines 37-41.

Regarding claim **19**, “wherein the repetitive RF interference is a radar signal” is anticipated by the radar impulse train detection spoken of on column 13, lines 27-36.

Allowable Subject Matter

6. Claims **1, 3, 5-11, 20-29, 31, and 35-37** are allowable over the prior art of record.

7. Claims **32 and 33** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding *amended* claim **1**, *Howard* teaches the RF Impairment Detector and Classifier 220 (means) of Figure 2 that identifies (detects) RF impairments on the upstream channel as spoken of on column 6, lines 26-31 and 59-67.

Howard also teaches the system manager 222 and scheduler 218 (means) of Figure 2 that receives a report of periodic impulse/burst noise and avoids the interference by not scheduling any upstream transmissions during intervals where the interference is present as spoken of on column 13, lines 37-50.

Howard also teaches the periodic impulse/burst noise (PIB) detection system (means) spoken of on column 11 line 62 – column 12 line 5, as well as column 13, lines 36-50, that uses the PIB pulse width as a factor to determine whether to apply forward error correction or to schedule around the interference.

Howard as well as the other prior art of record fails to teach where the scheduling means includes means for shifting a time sequence of the RF data transfer to avoid the interference in combination with the other limitations of claim 1.

Regarding claims **3, 5-11, 31, and 36**, these claims are further limiting to *amended* claim 1 and are thus also allowable over the prior art of record.

Regarding claims **20-29, 35, and 37**, these claims are allowable for the reasons indicated in the Office Action mailed 6/22/06.

Regarding *amended* claim **32**, *Howard* teaches the method of claim **12**. *Howard* as well as the other prior art of record fail to teach determining the most efficient of: adjusting time sequences of RF transmissions to accommodate the interference profile; and resending the data sent during the interference in combination with the other limitations of claim **12**.

Regarding claim **33**, this claim is further limiting to *amended* claim **32** and is thus also allowable over the prior art of record.

Response to Arguments

9. Applicant's arguments, see "Pre-Appeal Brief Request for Review", filed 3/29/07, with respect to *amended* claims **1, 3, 5-11, 31, and 36** have been fully considered and are persuasive. The rejections of these claims have been withdrawn.

10. Applicant's arguments filed 1/29/07 regarding claims **12-19** have been fully considered but they are not persuasive.

Regarding claim **12**, Applicant argues that the RF Impairment Detector and Classifier 220 of Howard (U.S. 7,024,680) is not a filter as set forth in the claims, and is not swept across an RF band of interest.

However, no further definition of "a filter" is provided in claim **12**. According to the claim language, "a filter" is used to detect interference. As provided in the previous Office Action, the RF Impairment Detector and Classifier 220 (filter) of Figure 2 identifies RF impairments (detects interference) on the upstream channel (RF band of interest) by examining FEC errors, FFT output data, and time sample data (sweeping across the RF band of interest) as spoken of on column 6, lines 26-31 and 59-67. It is therefore held that Howard anticipates this claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached at (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Moore, Jr.
Examiner
Art Unit 2616

mjmMM


8/1/07
WING CHAN
SUPERVISORY PATENT EXAMINER